

SIXTH ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH
TO THE
COMBINED RURAL AND THE URBAN
SANITARY AUTHORITIES
OF THE
CITY AND COUNTY OF HEREFORD,
1879.

By H. VAVASOUR SANDFORD, M.D., &c.

HEREFORD
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TO THE URBAN SANITARY AUTHORITY OF THE
CITY OF HEREFORD AND THE COMBINED
RURAL SANITARY AUTHORITIES OF THE SAME
COUNTY.

December 31, 1879.

MR. MAYOR AND GENTLEMEN,

In presenting you with my Sixth Annual Report, I regret to say it will not meet with that amount of satisfaction as the one of the previous year, inasmuch that the Mortality Tables herein show a material increase in every Union District and Sanitary Authority. At the same time, expressing such regret, it will be pleasing for you to be informed that such increase of Mortality in this City and County does not emanate from infectious or contagious disease; indeed (with the exception of one Union District) there is almost a total immunity from such class of disease, thus proving beyond doubt that the efforts of your different Sanitary Boards in zealously carrying out the Public Health Acts, 1872 and '75, for the last seven years, have been amply rewarded. The fact of the absence of infectious disease proves that the five hundred square miles over which this combination extends has been prepared to meet an enemy, very difficult in Rural districts to contend against (a miserably cold and wet year), a year almost void of sunshine, with perpetual rain, floods and excessive humidity, producing rank and worthless vegetation in most cases—worthless both to man and beast; and when allowed to rot and heat giving off septic and pernicious gases injurious to both, which if it had not been combated against by previous Sanitary precautions, such decomposing matter would have found its way into wells and springs throughout the County, causing Diarrhoea, Enteric, Typhoid, and other air and water poisons, which, I am happy to say, the Mortality Tables are comparatively free from.

Not only has this sunless summer been injurious to vegetation, but it has had a marked depressing influence upon mankind, more especially on those under 5 years of age and over 60. It has caused a want of vitality, a want of muscular development—or Atrophy, a Hemorrhagic Diathesis—a want of appetite, a loathing of food, a tendency to vomiting; in fact, a “maladie” more like what you may observe very often on the flats and plains of Holland and Germany, which if witnessed in our ague counties would have been set down as the first stage of Intermittent Fever—not bad enough to be ill—yet so ill as not to feel well enough to be able to enjoy life. This peculiar illness (particularly the hemorrhagic) I have noticed throughout my district; and where it has attacked infants and those of an already

impaired constitution, it has in great measure swelled the Mortality Table classed "*Other Diseases.*" This class of disorganisation or breaking down I cannot but think is mainly owing to excessive humidity and decomposed vegetable polluted air; added to which the want of nourishing constituents in all classes of fruit and vegetables, of which the last year has been totally void: the same deficiency being found in the animal kingdom, producing meat of a loose and flabby character, without flavour, and very deficient in firmness of muscle and tissue. The milk flavourless, and never yielding more (at any analysis) for the summer months than nine degrees of total solids (not fat). To sum up, everything grown in this county for the last twelve months has been wanting in, and deficient of, life-sustaining products, ordained by Providence for the support of man.

The cereal deficiency in this County is something appalling, and can best be understood by reading the following from the *Mark-lane Express* of January, 1880:—

"THE WHEAT CROP OF HEREFORDSHIRE.—Bosbury, 50 to 70 per cent. under average; Donnington, under average, not more than 2 quarters.; Ivington, under average, about 4 quarters; Kington, under average, in bad condition; King's Pyon, very much under average, very bad condition; Ledbury, much under average, condition bad; Leintwardine, not many thrashed, say one-third under average; Leominster, under average, 5 to 20 bushels per acre, mostly in bad condition; Orleton, very much under average, in bad condition; Pembridge, not half an average, quality inferior; Ross, 20 bushels, secured in very bad condition."

And this is not all. Many flocks of sheep are seriously diseased, not only "*Fluked*," but on examining the livers of many that have been "slaughtered to save their lives," I have found under the microscope a peculiar disease or condition of the liver, a sort of granular breaking down of the substance, the same being very light in colour, the capillaries degenerated, the bile ducts atrophied or obliterated, &c. The meat of these sheep conspicuously shows in the fat cellular tissue, &c., a peculiar acid fluid, which, if allowed to accumulate and the disease progress, would render the meat unfit for the food of man. The cause of this disease I set down to the deficiency of sugar, starch, and iron in the washed-out vegetation which the animals have been compelled to resort to for food.

These facts, added to the extreme cold of January and February, and November and December (the thermometer at one time indicating 18 below freezing), causing a large majority of deaths from Pulmonary and other respiratory diseases, will account for the excessive rate of mortality in all my districts.

Having given a slight outline of the cause of this increased Mortality, I will simply mention what measures have been considered and adopted by the different Sanitary Committees to

reïnstate the County in a healthy condition; the most important being the supply of pure and wholesome water for the inhabitants of every occupied dwelling, under the Public Health (Water) Act, 1878, which came in force March 25th, 1879. This Act specifies, "That it shall be the duty of every Rural Sanitary Authority, regard being had to the provisions in this Act contained, to see that every occupied dwelling-house within their district has within a reasonable distance an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house.

"Where it appears to a Rural Sanitary Authority, on the report of their Inspector of Nuisances, or their Medical Officer of Health, that any occupied dwelling-house within their district has not such supply within a reasonable distance, and the Authority are of opinion that such supply can be provided at a reasonable cost not exceeding a capital sum, the interest on which at the rate of five per centum per annum would amount to twopence per week, or at such other cost not exceeding a capital sum, the interest on which at the rate of five per centum per annum would amount to threepence per week, as the Local Government Board may on the application of the Local Authority determine under all the circumstances of the case to be reasonable, and that the expense of providing the supply ought to be paid by the owner or defrayed as private improvement expenses, proceedings may be taken as follows." and so on.

Now the first and most important question to be decided by such respective Sanitary Authority in this County (to which I have the honour of being Medical Officer of Health) has been "the reasonable distance" that a tenant or occupier of any dwelling shall have "an available supply of wholesome water sufficient for the consumption and use for domestic purposes, &c. (that is *drinking water*), good, and a *sufficient quantity*."

To meet this important and grave clause I found myself in great perplexity, and to carry such clause out, had only one alternative—that of having a house-to-house survey made in every Parish and Hamlet within the respective Union districts of every occupied or tenantable house or cottage, such survey setting forth the distance of any water to be fetched or carried for consumption, at all available; the reputed character of such water *in dry and wet weather* (a question of great moment in this county); also whether such water was obtained on *sufficiency* from a neighbour's well or spring.

In every Union Sanitary District this survey has been carried out in a large moiety of the parishes within the several Union Districts. Being armed with these Survey Statistics, special meetings of the Members of each Rural Sanitary Authority have been convened, all of which were well attended by Landed Proprietors and Householders; and, after mature and serious

consideration, a large majority of members of each Sanitary Authority have unanimously agreed to fix five hundred yards as the extreme limit allowed to be a "*reasonable distance*" to fetch water by tenants of occupied houses now in occupation, or to be occupied; and two hundred yards to be the extreme distance for all *future* houses to be built or constructed, or those houses to be pulled down and rebuilt or reconstructed. So far, this great question of distance has been maturely considered and settled; and I, having visited and being well acquainted with every district of such Sanitary Authority, am of opinion no better arrangement can be come to, and strongly recommend the same for the approval of the Local Government Board, London.

Touching upon those premises or houses the tenants of which are entirely dependent on water obtained *on sufferance* from neighbour's wells and springs, this supply I consider most equivocal, as such supply may be cut off at an hour's notice, if left to a neighbour's caprice; consequently an arrangement *must* be come to between the respective owners of such adjoining tenements, as to insure and secure the tenants of such a free and uninterrupted right to the use of such water. Without this being enforced, I consider such houses so situated to be void of the required supply, as specified by the Act.

The *quality* and *quantity* of such water is a question for further consideration and inquiry, and can only be solved by careful examination and chemical analysis, entailing considerable time and expense, which, in due course, will be carried out under the 7th Clause, as follows:—

"It shall be the duty of every Rural Sanitary Authority from time to time to take such steps as may be necessary to ascertain *the condition of the water supply within their district*, and the authority may pay all reasonable costs and expenses incurred by them for the purpose of taking such steps. The Authority, or any of their officers, or any person duly authorised in writing for that purpose by the Authority, if they or he have or has reasonable ground for believing that any occupied dwelling-house within the district is without *a proper supply of wholesome water*, sufficient for the consumption and use for domestic purposes of the inmates of such house, shall be admitted into the premises for which such supply is required or from which the water supply may be derived for the purpose of ascertaining whether or not such house has such a supply within a reasonable distance; and for the purposes of any such admission sections 102 and 103 of the Public Health Act, 1875, shall apply in the same manner as if such admission were necessary for the purpose of examining as to the existence of any nuisance on the premises, and the person so authorised as aforesaid were an officer of the Rural Sanitary Authority."

Another most important matter to lay before your respective Sanitary Authorities and that of the Local Government Board is the supply of pure and wholesome water for the children collected together in *Public Schools*. Are such schools to be considered as inhabited houses? I am cognizant of many such Schools in this County totally without any good water being provided for the poor children during the hottest weather, compelling them to obtain it where best they can, and sometimes drinking such so obtained of a highly dangerous character.

This question has been decided by one or two Sanitary Authorities that *a school is not an inhabited house*, under the Public Health (Water) Act, 1878. If this be the case, and such Act so construed (and this ruling stands good), I must at once make an urgent appeal to the Local Government Board for the Act to be rectified, and a special clause to meet the case made or inserted; convinced am I, without such supply of pure water for the children, most serious results will eventually accrue if left to their own resources to obtain it (for obtain water they do and will), whatever the character or impurity may be.

As regards the prevention of the spread of Infectious Disease, I still advocate the necessity of the medical men attending such cases that they be compelled by the Legislature to give information to the Medical Officer of Health as soon as such disease is diagnosed, they being paid for such information (under a penalty). For nearly seven years have I advocated this being carried out, and every year am I more convinced that the Public Health Act is seriously defective without such a clause being inserted. It is simply absurd to suppose I can arrest the spread of infection when not being aware where such infection exists at the onset. What is the use of my being informed of infectious disease after it has been allowed to germinate in half a dozen families in a parish? Seldom do I get such information until this has taken place, and even then (if the patients do not happen to be paupers) am *refused* the information from medical men when applied for, or if given, the certificate is so equivocal that I can seldom take legal action thereon to enforce isolation and thorough disinfection in time to be of any avail.

Another matter I would call your attention to, and that of the Local Government Boards also. Three years ago an Analyst was appointed by the proper Authorities for this County. Now during these three years I *positively* do not believe twenty samples of Food or Drugs have been collected and submitted for analysis in this County—not that there is *no adulteration* in the Rural districts—far from it. I know, for a positive fact, the poor are swindled in these districts to a fearful extent by huxters and packmen trading in almost every

class of food, &c., &c. I would now ask the Local Government Board, whose duty it is to collect and obtain samples of Food and Drugs vended in Rural districts? and who is to reimburse the party so collecting for the purchase of such samples? It is quite time this matter were taken up with a firm hand and something settled as to whose duty it is to collect and take action thereon. For the City of Hereford, I would observe the Urban Sanitary Authority have vested in me the power of collecting any sample of Food or Drugs sold within their City boundary, and if on examination I find any article adulterated to any extent, I have the power of sending such article so collected to the appointed Analyst for the County. This plan has, as far as it has been tried, worked well; and I am pleased to state very few towns in the United Kingdom possess a better class of tradesmen than those in the City of Hereford.

I would further inform you the third bi-annual House-to-house Sanitary Survey is almost finished over your respective districts, bringing to light the attached list of Nuisances injurious to health in your districts, most of which, I am pleased to say, are removed without legal proceedings being resorted to. Where neglect of the removal of such nuisances has existed *there* will be found disease lurking, and reported to you by me in my remarks under the head of each Sanitary Authority, hereto attached.

As regards the Public Health (Interments) Act, 1879, now in force, I would observe it has been an impossibility for me to go into the matter, except in a special case or two. I trust, however, after getting the Public Health (Water) Act carried out in this County, to give the subject my serious attention, and report to you thereon. You must bear in mind since my appointment in 1873 five important Acts have been added to the work of the Medical Officer of Health—"The Public Health Act, 1875;" "The Hop-pickers' Act;" "The Sale of Food and Drugs' Adulteration Act;" "The Canal Boats' Act;" "The Public Health (Water) Act;" "The Public Health (Interments') Act;" all of which entail upon me an immense amount of personal supervision, and extra work and expense, over an area of five hundred square miles.

In conclusion I would mention, in consequence of the late miserable year experienced, Pauperism has increased in every district, as also an extra amount of sickness and deaths amongst this class of people, returns of which I have made to the best of my ability, and which may be fairly relied upon, although such returns at times are difficult to procure regularly over so large an area.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

VAVASOUR SANDFORD,

M.D., L.R.C.P., London, M.G.S., &c., &c.

THE URBAN SANITARY AUTHORITY OF THE CITY OF HEREFORD.

Population of City, about 19,100.

Houses, about 3,400, giving about 5 people to a house.

Area, 2,417 acres.

Parishes, 6.

The third house to house survey of this City is nearly finished.

Nuisances found to exist this year 275

Nuisances removed by owner or occupier 275

Consisting of removal of Pigs and Styes, Pigs' Wash,

Filth, and Ashes 119

Stoppage of Pipes and Drains to W.C.'s 79

Smoke, Dead Animals, Offensive Poultry, &c. ... 69

Prosecutions under the Act 1

Structural work done... .. 0

Lodging Houses Licensed, Inspected and Whitewashed
twice a year 8

Bakehouses, Inspected and Whitewashed twice a year 35

Slaughter-houses, Inspected and Whitewashed twice a
year (one prosecution) 8

Do. (Public), fitted up with every Sanitary Arrange-
ment. The Provision Market good and inspected
regularly twice a week, in which one case of im-
proper meat has been offered for sale this year and
condemned.

Under the "Dairies and Cow Sheds Provisional
Order," and Dealers in Milk within the City
Inspection, and Registration of Premises by
Inspector of Nuisances for Dairies 39

Disinfection of Bedding, Beds, Clothes, and Drapery
carried out in all cases, at the Public Apparatus—
when required 0

Births for the year 1879, Males 276

" " Females 279

Total 555

Of this number 31 were Illegitimate, the position in life
of the mother being returned as "Domestic Servant,"
showing a decrease of 2 to the 33 for the year 1878.

Deaths for the year 1879 456

Rate of Mortality... .. 23·8 per 1000.

Table of Mortality and Sickness in the Urban Sanitary District of the City of Hereford, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.			Sickness and Deaths among Paupers.						
	Total Deaths registered as above.			Sickness and Deaths among out-door paupers; and among any paupers who belong to the District or Division, and have been removed into the Workhouse on account of illness; whether the Workhouse be within or without the District or Division.						
	Aged under 5.	Aged 5 and upwards.	III.	IV.	V.	VI.	DEATHS. Aged 5 and upwards.	VII.		
I.	II.	III.	IV.	V.	VI.	DEATHS. Aged 5 and upwards.	VII.			
Small Pox	5	..	20	7	2	..	..	
Measles	..	..	4	..	..	..	..
Scarlatina	3	1	..	3	1	..	..	
Diphtheria	2	..	6	2	..	..	..
Group (not "spasmodic")	27	..	30	20	..	..	7	
Whooping-Cough	..	..	..	..	..	..	..
"Continued" Fevers { Typhus Enteric Of other, or doubtful sorts	..	..	..	..	..	..	..
	4	2	5	2	..	..	..
Diarrhoea and Dysentery	..	1	..	..	..	..	..
Cholera	..	1	..	..	..	..	..
Rheumatic Fever	..	1	..	3	..	..	..
Erysipelas	..	1	..	3	..	..	..
Pyæmia	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..
AGUE	7	30	..	10	2	..	5			
PTITISIS	39	61	40	70	10	..	20			
BRONCHITIS, PNEUMONIA, AND PLEURISY	..	14	..	10	7	..	5			
HEART-DISEASE	6	11	10	15	2	..	4			
INJURIES	65	176	60	290	20	..	27			
DISEASES NOT NAMED ABOVE	158	298	175	434	37	..	68			
Total	..	..	..	..	..	..	..

THE URBAN SANITARY AUTHORITY OF THE CITY OF HEREFORD.

December 31st, 1879.

Mr. Mayor and Gentlemen,—On comparing my Sixth Annual Report on the Sanitary condition of your City with the one for the year 1878, it will be observed that the Mortality Tables show a marked increase of deaths this year; this increase being entirely attributable to atmospheric influences, which Sanitary Legislation has little or no power to control, as I have shown you in my opening address. At the same time, with all these visitations upon us, we must congratulate ourselves that these Tables of Deaths show a marked absence of the word “Fever”—as the cause. Indeed, with the exception of the 27 deaths from Whooping Cough, the five from Measles, the four from Diphtheria, the 17 from Accident (eight of which were imported), the 14 from heart disease, the rest may safely be set down as being greatly augmented and increased by the severity of the whole year; and these exceptions (Measles and Whooping Cough) I do not hesitate to say in a large majority terminated by Pneumonia and Bronchitis accelerated by wet and cold.

All action taken by your Sanitary Committee and myself will be found in my four Quarterly Reports hereto attached.

I am, Mr. Mayor and Gentlemen,

VAVASOUR SANDFORD, M.D., &c.

Bridge House, Hereford, December 31st, 1879.

March 31, 1879.

Annexed to this report are the quarterly reports of the Medical Officer of Health and Inspector of Nuisances for the quarter ended the 25th March last, which are sent up for consideration.

The Committee recommend the Town Council to authorise the issuing of summonses against John Davies, 125. Widemarsh-street, and Samuel Kinsey, of Bewell-street, for not complying with an order to remove pigs and dung in Hull's Garden, Widemarsh-street, served on them on 1st March last, and which, up to this time, the Inspector of Nuisances reports have not been removed.

THOMAS CAM, Chairman.

Mr. Mayor and Gentlemen,—Having so recently presented you with my annual report on the Sanitary condition of your City for the year 1878, wherein every detail therein is laid before you, it only remains for me to call your attention to the amount of

mortality for this quarter, ending to-day. I regret to inform you now such rate of mortality has considerably increased, in consequence of the extremely severe weather it has pleased Providence to afflict us with, there being no less than 117 deaths from all causes registered for the March quarter, 37 of which are over 60 years of age, and 49 below five years, and, with the exception of five Infantile deaths, emanating from Lung Affections after Measles, two from Whooping Cough, two from Diarrhœa, one from Puerperal or Child-bed Fever, and four from Accident, the whole of the remainder of deaths for this quarter are registered as from affections of the respiratory organs, age, and other non-zymotic disease. Of these 117 deaths, two were between the ages of 90 and 100, six between the ages of 80 and 90, 20 between 70 and 80, and nine between the ages of 60 and 70.

Of prevailing illness this quarter of an infectious type. Measles only have to be mentioned, and this malady has only proved fatal in five cases, principally owing, also, to the severity of the weather, four of the five dying from Pneumonia.

I have received several letters and complaints of the colour of the water supplied from the City Works not being so bright. In reply to such, I am happy to inform your Board this discolouration simply originated from your Surveyor causing the filtering beds to be relaid and cleaned out, and further to state such water is now pure and maintains its usual standard of excellence.

The third house to house sanitary survey is now being carried out by your Inspector, bringing to light many nuisances accumulated (and injurious to health) since the last survey was finished. These I must ask your Board to deal with, and apply more stringent measures to suppress, more especially to those keeping swine in a filthy state, and causing offal and other filthy stuff to be kept in tubs and other vessels for food until it begins to ferment and gives off most dangerous gases. Many of these offending parties have had notice to remove such nuisances, and have complied with such notice for a week or so, after which the animals have been brought back, and the same nuisances and worse have been boldly committed. I would remind your Board hot weather will soon be on us, therefore summonses ought to be issued as soon as these practices are found out, without allowing a day's delay, the parties having had ample notice and warning that they were transgressing by so accumulating such nuisance.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

H. VAVASOUR SANDFORD, M.D., &c.

June 30th.

The Sanitary Committee report that the power of the Committee to institute proceedings for the recovery of penalties under the Public Health Act, 1875, having been questioned, the Town

Clerk entered into communication with the Local Government Board on the subject, and has now obtained from the Board a definite reply, of which the following is a copy, viz. :—

Local Government Board, Whitehall, S.W.,

July 5th, 1879.

Sir,—I am directed by the Local Government Board to advert to your letter of the 16th ultimo, with reference to the power of the Town Council of the Borough of Hereford to delegate to a committee their authority to institute proceedings under the Public Health Act, 1875, for the recovery of penalties.

I am directed to state that the Board have considered the question, and that it appears to them that, under Section 200 of the Act referred to, the Town Council, as the Urban Sanitary Authority, may appoint a committee to whom they may delegate their power of taking proceedings for the recovery of penalties from offenders.

I am, Sir, your obedient Servant,

WALTER J. SENDAL,

Assistant Secretary.

To J. Carless, jun., Esq., Town Clerk, Hereford.

Having regard to the opinion contained in the letter, the Committee ask the Town Council to appoint them a committee to whom shall be delegated authority to institute proceedings under the Public Health Act, 1875, for the recovery of penalties from offenders in the name and on behalf of the Urban Sanitary Authority.

Annexed to this report is the report of the Medical Officer of Health for the quarter ended 30th June last.

Hereford, June 30th, 1879.

Mr. Mayor and Gentlemen,—My report upon the healthiness of your city for the quarter ending to-day is far from satisfactory, inasmuch that the rate of mortality is two-thirds higher than the corresponding period of last year, owing to the fearful inclemency of the weather and the unprecedented amount of rainfall.

The total number of deaths from all causes being 144, of which amount, I regret to say, 64 are below five years of age—revealing a heavy infantile Death Rate, the causes assigned for this 144 being 3 from Diphtheria, 18 from Whooping Cough, 1 from doubtful fever, 1 from Diarrhoea, 12 from Phthisis, 10 from Pneumonia, 26 from Bronchitis, 4 from Heart Disease, 5 from Accident or Injury, and 64 from other diseases of a Non-zymotic Type. You will perceive, if we take the increased amount of cases as emanating from Whooping Cough, Bronchitis, Pneumonia, and Phthisis, these will very nearly account for such increased rate of mortality for this quarter, and which is mainly owing to the severity of the season.

As regards the three recorded cases of Diphtheria, one hap-

pened to a child, 1 year old, residing in a house in Harrison's-gardens, Bath-street. From personal supervision and inquiry, I am at a loss to account for its showing in these premises, there being no Sanitary deficiencies.

Another case occurred to a young man (a rural postman) residing at Hinton-road. There can be but very little doubt this case was contracted in the country and imported into the city—from what I can glean from the relations—and in no ways attributable to sanitary deficiencies in the house.

The other case occurred in a house in Bath-street to a child three years of age. The premises where this case occurred are sadly deficient in sanitary arrangements, and quite sufficient to account for the case showing there. By my wish the parties have left the premises, it not being safe to reside any longer in the house. I must ask for an order from your Board to prohibit the house being re-let until put in proper sanitary condition.

Touching upon the case returned as dying from Typhoid Fever, &c., this occurred to a woman, aged 30, residing at 19, Richmond-street. I have personally made every investigation, and cannot account for the same from any local defect. The relatives inform me the woman had been ailing for months and constantly under medical treatment.

Before leaving the subject of mortality, I am authorised to lay before your Board the matter of burying under false certificates of the cause of death. From information received I caused an inquest to be held upon the body of a woman who arrived in Hereford late on a Saturday night and died early the next morning, the cause of death being registered by the mother as from consumption, and after such registration a certificate was obtained from a medical man stating he had attended the woman the day before she started for Hereford, and assigning the cause of death as from "diphtheria and exhaustion" which certificate the jury refused to accept, it not being in accordance with the evidence adduced before them; and would further state that since such inquest inquiries have been made from the medical man signing such, in reply to which he admits the certificate to be erroneously filled up both as regards the nature of the disease and the time of last seeing the poor woman.

Of general subjects to bring before you to-day, they consist of the examination by me of different kinds of food and drugs vended in your city, and under the arrangement recommended by your Sanitary Committee and adopted by your Board at your last monthly meeting. I have tested nine samples of butter offered for sale, two of such samples having been brought to me, the other seven procured by my own analysis. In all of such samples I find no actual adulteration. At the same time, I am bound to state some had too much salt and water; others were a mixture of different butters; two very rank and blended with fresh butter,

which soon took up such rankness and made the whole very stong to smell and taste.

Two tubs of American pig cuttings or trimmings I have also looked to, and find them highly impregnated with the nitrate of potash and common salt. This potash, if taken in excess, will bring on fearfully painful Diarrhœa, as your medical men will inform you. This class of food ought to meet with a speedy sale, or it becomes injurious to health if over-saturated with the potash.

The American lard I have examined in three instances, and find it good and pure.

Four samples of flour reveal the fact that they are all flour, but blended by different growths of wheat.

Six samples of bread show nothing but the addition of potato leavening and an excess of salt with the exception of one case, which revealed the fact that cleanliness had not been observed in the making. Many samples of cheap moist sugar I have examined sold at $2\frac{1}{2}$ d. and 3d. per pound, none of which can I find any cane sugar in, most of it being obtained from beet, carrots, and many other sacchariferous produce, but not near the sweetening powers of good cane sugar which would be cheaper to buy at $4\frac{1}{2}$ d. or 5d. per lb. using half the quantity.

Some samples of bacon and cheese sold at 2d. per lb. is just within the limits of being passed, but it is miserable stuff, to make the best of it, and very little life producing properties therein.

Five samples of milk examined by me do not in a single instance show 12 per cent. total solids (the standard for best milk); this I can in great measure account for by the cows taking in such a large amount of water with the grass feed during this excessive wet season, and not being stall fed.

Two samples of sweet spirits of nitre which are up to the standard, and two pints of gin which were sold as being diluted 20 per cent. with water, constitute my inquiries under the Food and Drugs Adulteration Act for this quarter.

I would further mention a carcase of beef was condemned and destroyed as unfit for human food, being full of internal inflammation. Also two lots of mackerel met with the same fate at my hands.

As regards the quality of the water, it maintains its usual standard of excellence, with the exception that there has been a slight excess of total solids per gallon, owing to the floods this quarter, and further making it a little tinted from peat contamination.

The third house-to-house Sanitary survey is being carried out by your Inspector of Nuisances to my satisfaction, continually bringing to light nuisances that were not in existence when the last was made—more particularly those of pig keeping within the precincts of your city. I have only to say there can be no limit fixed as to distance from a dwelling for them to be allowed to be kept. It is

simply a question—are they kept in that state as to become offensive and a nuisance, consequently injurious to health? If so, and complained of as such, this nuisance must be abated, whether within or without the prescribed limits.

In conclusion, I submit for your Committee's consideration that they recommend to you, Mr. Mayor and Gentlemen, the desirability of not having the names of the tradesmen and others from whom I received and obtained samples of different articles of food and drugs, mentioned in public, unless it be found necessary to institute legal proceedings against them, when every publicity will be furnished by me to your Board and the public.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

H. VAVASOUR SANDEFORD,

M.D., L.R.C.P., London, &c., &c.,

Medical Officer of Health City and County of Hereford.

Bridge House, June 30th, 1879.

The Committee report that owing to communications from Mr. J. Lloyd to the Authority, and also to the Secretary of State, alleging that the Huntington Churchyard is over-crowded, and requesting that the same may be closed, the Committee are corresponding with the Local Government Board on the subject.

Annexed to this report is the Quarterly Report of the Medical Officer, which is of a highly satisfactory character.

Hereford, September 29th, 1879.

Mr. Mayor and Gentlemen,—I have pleasure in presenting you with my Report for the Quarter ending to-day, as it shows a great decrease in the number of deaths in your City, they amounting to only 84 from all causes, against 144 for the quarter ending June 30th last, being 60 less, and, with the exception of a case of Diphtheria, one case of Croup, one of *doubtful* Enteric Fever (which I fully explained to your Committee last July), and two cases of Diarrhoea, one from Pneumatic Fever, seven from Phthisis, five from Pneumonia, six from Bronchitis, one from Pleurisy, three from Heart Disease, six from Accident and Injury, the balance are of a Non-zymotic type. Of this total, I am pleased to say, 26 of such deaths only are under five years of age.

I am unable to furnish you with the amount of Pauper sickness within your City this quarter, in consequence of not having received any returns for the last two months. This is a serious drawback to the working of the Public Health Act; and, now that it is made imperative that such returns should be furnished to me regularly every fortnight, I must ask your Board to issue orders that I may receive such at stated periods.

Of general subjects I have only to mention this quarter that I am continuing the examination of different samples of food and

drugs sold within your city, and that up to this date in none do I find sufficient adulteration to warrant my recommending your taking legal proceedings against those parties so transgressing.

The water supplied to your city continues to maintain its former standard of purity and excellence.

The third house-to-house sanitary survey is being carried out by your Inspector to my satisfaction, revealing continued accumulating nuisances, all of which, as soon as discovered, orders are issued to abate same.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

VAVASOUR SANDFORD

Hereford, December 31st, 1879.

Mr. Mayor and Gentlemen,—My Report of the Sanitary condition of your City for the quarter ending to-day is satisfactory as regards the absence of any death from any infectious or contagious disease; at the same time I regret to say the mortality has much increased, being 104 this quarter against 84 for last quarter, this increase being attributable to the late rapid and severe weather experienced for the last six weeks (the cold at one time being registered as 19 degrees below freezing) proving most trying to lives under 5 years of age and those over 60. Twenty deaths are recorded as under 5 years; three between 5 and 15; four between 15 and 25; twenty-five between 25 and 60; and the large number of forty-eight from 60 to 100. Of this 104 deaths two are recorded as emanating from Whooping Cough, one as from Croup, seven from Phthisis, three from Heart Disease, two from Accident, four from Pneumonia, nineteen from Bronchitis, three from Pleurisy; the balance of 63 from old age and other senile infirmities.

Of prevailing sickness for the quarter, Pulmonary affections increase; four cases of Scarlet Fever and Whooping Cough have predominated.

Of general subjects to lay before you I would observe, the water supplied to your City maintains its standard of purity and excellence.

The analysis of Articles of Food and Drugs vended within your City has been carried out by me with good results. I not having any particular article to call your Sanitary Committee's attention to for legal proceedings to be instituted.

The third house-to-house Sanitary Survey is being continued by your Inspector of Nuisances throughout your City with good results, causing many accumulating and injurious nuisances to be removed and permanently done away with.

Being shortly in a position to lay before you my Annual Report for 1879, in which will be found all particulars, and work done under the Public Health Act, I will not further trespass

upon your Committee's valuable time more than to sincerely thank the Chairman, T. Cam, Esq., and its members, for their able assistance in carrying out my duties.

I am, Mr. Mayor and Gentlemen,

Your obedient Servant,

VAVASOOR SANDFORD, M.D., &c., &c.

Bridge House, Hereford, 31st December, 1879.

Table of Mortality and Sickness in the three Divisions of the Rural Sanitary District of the Bromyard Union, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.		Sickness and Deaths among Paupers.			
	Total Deaths registered as above.		Sickness and Deaths among out-door paupers; and among any paupers who belong to the District or Division, and have been removed into the Workhouse on account of illness; whether the Workhouse be within or without the District or Division.			
	Aged under 5.	Aged 5 and upwards.	NEW CASES.			
	II.	III.	IV.	V.	VI.	VII.
I.						
Small Pox .. .. .	..	..	12	15	..	..
Measles .. .. .	..	..	2	6	..	..
Scarlatina .. .. .	..	..	..	..	..	..
Diphtheria .. .. .	..	..	2	..	..	..
Croup (not "spasmodic") ..	..	..	4	3	..	..
Whooping-Cough .. .. .	..	2	..	..	..	..
"Continued" Fevers { Typhus Enteric Of other, or doubtful sorts	..	..	..	..	..	..
	..	1	2	4	..	..
	..	2	1	5	..	..
Diarrhoea and Dysentery ..	..	..	..	..	..	..
Cholera .. .. .	..	..	..	..	..	..
Rheumatic Fever .. .. .	..	..	..	..	..	..
Erysipelas .. .. .	..	..	..	..	..	..
Pyæmia .. .. .	..	..	..	..	..	..
Puerperal Fever .. .. .	..	..	..	..	..	..
AGUE .. .. .	..	..	..	..	..	..
PHTHISIS .. .. .	..	14	..	6	..	2
BRONCHITIS, PNEUMONIA, AND PLEURISY	20	37	30	76	5	8
HEART-DISEASE .. .. .	..	12	5	11	..	4
INJURIES	3	9	..	7	1	3
DISEASES NOT NAMED ABOVE	33	101	50	260	9	40
Total	56	178	108	393	15	57

TABLE of DEATHS during the year 1879 in the three Divisions of the Rural Sanitary District of the Bromyard Union, classified according to Diseases, Ages, and Localities, and showing also the Population of such Localities, and the Births therein during the year.

[illegible]

THE BROMYARD RURAL SANITARY AUTHORITY.

December 31st, 1879.

Gentlemen,—The total immunity of any death from infectious or contagious disease in the Tables of Deaths hereto attached, for the last twelve months within your Union district, must be convincing proof of the benefits derived by your Sanitary Committee so ably carrying out the Public Health Act. At the same time I regret to inform you, with all the Sanitary legislation, the rate of mortality has seriously been augmented in all three of your districts from the late inclement year, giving an increased Death-rate of close upon 5 per 1,000 in all your districts; such increase corresponding with the same increase throughout the county. However great this increased, still it is gratifying to know it has not materially altered the number of deaths of infants and those under five years of age, they being only seven over last year's returns of Infantile Mortality. The excessive Death-rate being drawn from those over sixty years of age, the causes of which are principally from Pneumonia, Bronchitis, Phthisis, and other senile infirmities; nor can I point out any particular district that has suffered most from such disease seeming to have participated in swelling the Death-rate from the before-mentioned atmospherically influenced ailments which are entirely non-subservient to Sanitary legislation.

The only matter of consequence to draw your attention to is the imperfect state of your Sewers in the Town of Bromyard. You must be well aware I was obliged to obtain an order from the Magistrates to close a valuable well of water in Sheep-street for three months, in consequence of its being polluted by the bursting of one of the tributary Sewers not far off the well; fortunately another well was within a quarter of a mile from this polluted one or the consequences would have proved most disastrous to over 150 people, who depended entirely upon the water for a supply. Had it been a hot dry summer instead of a cold and excessively wet one, matters might have assumed a very serious aspect. I must, therefore, beg of your Board's serious consideration in this matter, and adopt some more secure method of conveying the Sewage away from the wells than now

exists in the Town of Bromyard. I maintain and reiterate what I have for the last seven years advocated, that you have an ample supply of water in the town if you will only keep it from being polluted by the defective Sewers, &c., now in existence, when your town would be one of the healthiest in the county, and a health giving resort for miles round.

It only remains for me to say that the third Bi-annual Sanitary Survey is nearly complete, revealing and causing the nuisances injurious to health to be removed, as set out in the attached table; also that the House-to-house Water Supply is being carried out to my satisfaction in many parishes, sheets of which have been laid before your Sanitary Authority.

I am, Gentlemen,

Your obedient Servant,

VAVASOUR SANDFORD, M.D., &c.

Bridge House, Hereford, December 31st, 1879.

THE HEREFORD RURAL SANITARY AUTHORITY,

DIVIDED INTO THREE DISTRICTS.

Area: 70,974 Acres, consisting of 42 Parishes.

Population, about 17,333.

Houses, 4,720.

Aggregate number of people to each house, about 4.

The Third House-to-House Sanitary Survey is nearly finished.

Number of Nuisances found to exist this year, 288, consisting of—

Defective Drainage	...	...	...	...	...	...	32
Bad Privy accommodation	...	..	...	...	...	...	85
Dirty Pigstyes removed	...	...	...	...	...	...	29
Houses repaired	...	..	...	...	...	...	17
Offensive Drains, Ditches, Soil, &c.	...	..	...	...	...	...	77
Dwellings without Ventilation	..	...	...	...	...	...	14
Dangerous Wells altered	...	...	...	...	...	...	3
Stale Wash	...	...	...	...	...	...	22
Unexpired notices to abate	..	...	...	...	...	...	9

Births 443

Deaths from all causes 364

Rate of Mortality 21 per 1,000

for the whole of the Union district.

Table of Mortality and Sickness in the three Divisions of the Rural Sanitary District of the Hereford Union, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.			Sickness and Deaths among Paupers.		
	Total Deaths registered as above.			Sickness and Deaths among out-door paupers: and among any paupers who belong to the District or Division, and have been removed into the Workhouse on account of illness; whether the Workhouse be within or without the District or Division.		
	Aged under 5.	Aged 5 and upwards.		NEW CASES. Aged under 5.	DEATHS. Aged 5 and upwards.	
	II.	III.		IV.	V.	VII.
I.						
Small Pox	2	..		10	26	..
Measles .. .. .	..	..		2	4	..
Scarlatina	2	2		3	1	1
Diphtheria .. .. .	..	..		..	..	..
Croup (not "spasmodic")	6	1		9	18	1
Whooping-Cough .. .. .	..	..		..	..	2
(Typhus)	..	1		..	..	..
"Continued" Fevers .. .. .	..	..		..	..	..
Of other, or doubtful sorts .. .. .	..	3		10	10	1
Diarrhoea and Dysentery .. .. .	..	..		..	..	..
Cholera .. .. .	..	..		..	..	..
Rheumatic Fever .. .. .	..	..		..	4	..
Erysipelas .. .. .	..	1		..	..	..
Pycemia .. .. .	..	1		..	..	..
Puerperal Fever .. .. .	..	..		..	1	..
AGUE .. .. .	..	..		..	..	..
PHTHISIS	1	32		3	10	4
BROCHITIS, PNEUMONIA, AND PLEURISY	25	55		50	70	20
HEART-DISEASE .. .. .	..	22		7	7	4
INJURIES	4	9		2	6	3
DISEASES NOT NAMED ABOVE	52	145		90	300	20
Total	92	272		179	457	54

THE HEREFORD UNION RURAL SANITARY AUTHORITY.

Hereford, December 31st, 1879.

Gentlemen,—As in other Rural Sanitary Districts in this county, so it is in yours, the rate of Mortality having increased five per thousand this year, entirely owing to the before-mentioned inclement summer with the severely cold spring and winter telling heavily on those under five years of age and those over sixty. With this increased rate before us we have something still to be thankful for that this excessive Death-rate does not emanate from infectious or preventable disease; in fact, with the exception of four from Diphtheria (two of which were of a very spurious character supervening on other ailments) and a mild case of Enteric Fever and two from Measles, with seven from Whooping Cough, constitute all I have to record as preventable disease in the largest Union district in the county, having 42 parishes with a population over 17,000.

To be satisfied of the benefits derived from the working and carrying out of the Public Health Act by your able Sanitary Committee, you have only to compare the total number of deaths this year registered as from Measles, Diphtheria, Whooping Cough, Fevers of all kinds, Diarrhoea, &c., &c. This total does not give one death per thousand of your population for the whole twelve months throughout your Union district. Compare these facts with my former Annual Reports when the benefits derived by all classes from this noble Act will be made apparent; you and the public will naturally say “yes, but the Death-rate is in excess this year.” I admit it, and in reply can only say it is by the ordination of Divine will that it should be so—a power which no one can withstand—a visitation, in fact, not only in this district, but everywhere else in the United Kingdom. It will be seen on looking at the Tables of Mortality that there is very little difference in the rate in either of your three districts, Dewchurch being 18·9 per thousand, Fownhope 20·19, and Burghill 20·29 per 1,000, showing a lesser rate of 2 per 1,000 in the Dewchurch district.

Of general subjects to mention, the third bi-annual House-to-house Sanitary survey will in the course of a short time be

complete, and with it the water supply to each occupied house or dwelling, a portion of which survey sheets have been already laid before your Committee, and action taken thereon for the supply of water.

I am, Gentlemen, .

Your obedient Servant,

VAVASOUR SANDFORD, M.D., &c., &c.

Bridge House, Hereford, December 31st, 1879.

THE LEDBURY RURAL SANITARY AUTHORITY,
DIVIDED INTO TWO DISTRICTS.

Area: 48,783 Acres, consisting of 22 Parishes.

Population: About 13,209.

Number of Houses, about 2,920.

Aggregate number of people to each house, about 4.

The Third House-to-House Sanitary Survey is now finished.

Number of Nuisances found to exist this year 150

Consisting of Drains new and repaired 36

Earth Closets and Privies supplied 10

New pans to ditto 6

Overcrowding 7

Pigstyes removed 20

Houses disinfected 7

Cesspools cleansed, repaired and bricked, and removal of all offal and other nuisances 64

Births for the year 1879 318

Deaths 247

Mortality... .. 18·69 per 1,000

Table of Mortality and Sickness in the two Divisions of the Rural Sanitary District of the Ledbury Union, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.		Sickness and Deaths among Paupers.				
	Total Deaths registered as above.		Sickness and Deaths among out-door paupers; and among any paupers who belong to the District or Division, and have been removed into the Workhouse on account of illness; whether the Workhouse be within or without the District or Division.				
	Aged under 5.	Aged 5 and upwards.	NEW CASES. Aged under 5.	Aged 5 and upwards.	Aged under 5.	Aged 5 and upwards.	
	II.	III.	IV.	V.	VI.	VII.	
I.							
Small Pox .. .. .	..	..	..	..	..	..	..
Measles	2	1	16	20	1	..	..
Scarlatina .. .. .	..	..	..	2	..	..	..
Diphtheria	3	2	2	..	1	..	..
Group (not "spasmodic") ..	1	2	2	..	..	1	..
Whooping-Cough	3	2	10	12	1	1	..
"Continued" Fevers .. ..	..	..	..	..	..	..	..
{ Typhus .. .. .	..	..	..	..	..	..	..
{ Enteric .. .. .	..	..	..	..	..	..	..
{ Of other, or doubtful sorts .. .. .	..	..	..	..	..	..	..
Diarrhoea and Dysentery ..	..	..	..	10	..	..	..
Cholera .. .. .	..	..	..	..	..	..	..
Rheumatic Fever .. ..	..	..	2	4	..	..	..
Erysipelas	1	..	..	2	..	..	..
Pyæmia .. .. .	..	..	..	2	..	..	..
Puerperal Fever .. ..	..	..	..	..	..	..	..
AGUE .. .. .	..	..	..	..	..	..	..
PHthisis .. .. .	..	..	..	..	..	..	..
Bronchitis, Pneumonia, and Pleurisy ..	13	19	2	7	..	5	..
HEART-DISEASE .. ..	..	37	70	200	5	16	..
INJURIES .. .. .	..	31	..	15	..	7	..
DISEASES NOT NAMED ABOVE ..	33	4	3	4	1	2	..
.. .. .	..	93	70	350	10	25	..
Total	56	191	177	626	19	57	..

TABLE of DEATHS during the year 1879 in the two Divisions of the Rural Sanitary District of the Ledbury Union, classified according to Diseases, Ages, and Localities, and showing also the Population of such Localities, and the Births therein during the year.

Names of Localities.	POPULATION AT ALL AGES.			MORTALITY FROM ALL CAUSES, AT SPECIFIED AGES.												MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS IN PERSONS UNDER FIVE YEARS OF AGE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Census 1871.	Estimated to middle of 1879.	Registered Births.	At all ages.												Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not "specific").	Whooping Cough.	Continued fevers.						Diarrhoea and Dysentery.	Cholera.	Rheumatic fever.	Erysipelas.	Pyæmia.	Puerperal fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	Other Diseases.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Croup (not "specific").													Whooping Cough.	Typhus.	Enteric or Typhoid.	(Other or Doubtful).																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
I	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

THE LEDBURY RURAL SANITARY AUTHORITY.

December 31st, 1879.

Gentlemen,—Although your Union district has been comparatively free from any epidemic this year, still I regret to state that the Mortality Tables show a marked increase of deaths amongst those under five years of age and those over sixty, all more or less emanating from the before mentioned atmospheric causes. The five cases of Diphtheria registered attacked the inmates of houses in isolated districts, and in no ways attached or connected to each other; all, however, originating from impure water, which under the new Public Health (Water) Act has been remedied, and pure water provided. Measles have caused three deaths this year, the same showing in isolated and detached houses, spreading miles away from each other. The same in Whooping Cough, from which five deaths are registered for the year; these, with one from Erysipelas, constitute all I have to record to you as of an infectious nature, and I congratulate you upon such Mortality Tables being entirely free from the word fever.

I have pleasure in informing you that the works connected with the supply of pure water to a portion of the inhabitants of your town are now complete, and give great satisfaction. The sewerage of the same district is also in active operation, meeting with the same approbation; and to these two great Sanitary additions in your town do I attribute the Mortality Tables being void of the word fever, as the cause of death.

Of general subjects I would state that a third minute and rigid House-to-house Sanitary survey has been carried out by your Inspector of Nuisances throughout the whole of the parishes within your Union district, revealing and causing the number of nuisances to be removed, as set out in the attached Tables. With this survey a minute inquiry at every house has been made as to the available supply of water within the prescribed distance of 500 yards; also the quality and quantity of such water. These Survey Sheets have been gone through by Members of the Sanitary Authority; and I am pleased to state that energetic measures are and have been adopted, and special orders issued by the Board, calling upon owners of houses and property to supply any deficiency of water for their tenants within the prescribed radius of 500 yards within a given time.

I am, Gentlemen,

Your obedient Servant,

V AVASOUR SANDFORD, M.D., &c., &c.

THE LEOMINSTER RURAL SANITARY AUTHORITY

DIVIDED INTO THREE DISTRICTS.

Area: 64,593 Acres, consisting of 25 Parishes.

Population, about 10,662.

Houses, about 2,180.

Aggregate number of people to each house, about four and a half.

The Third House-to-House Sanitary Survey is nearly completed.

Number of Nuisances found to exist	...	...	...	...	55
Consisting of Dwellings repaired and whitewashed					12
Privies erected and repaired	...	...	...	...	10
Pigstyes removed...	...	...	...	...	17
New drains and repairs	...	...	...	...	15
Pumps, draw wells repaired, &c.	...	...	...	...	7
Public wells protected	...	...	...	...	0
Overcrowding removed	...	...	...	...	4
In hand	...	...	...	...	0
Births for the year, 1879	..	..	..	...	212
Deaths ditto, ditto	...	...	...	...	187
Rate of Mortality	...	...	...	...	17.3 per 1,000

Table of Mortality and Sickness in the three Divisions of the Rural Sanitary District of the Leominster Union, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.		Sickness and Deaths among Paupers.						
	Total Deaths registered as above.		NEW CASES.				DEATHS.		
	Aged under 5.	Aged 5 and upwards.	IV.	V.	VI.	VII.	Aged under 5	Aged 5 and upwards.	
I.	II.	III.							
Small Pox .. .. .	..	..	7	2	..	..	..	..	..
Measles .. .. .	..	..	4	..	..	..	..	..	..
Scarlatina .. .. .	..	..	..	..	..	..	..	..	..
Diphtheria	1	..	2	7	..	..	..	..	..
Croup (not "spasmodic") ..	1	..	10	..	..	..	..	..	..
Whooping-Cough .. .. .	..	..	..	..	..	..	..	..	..
<div> <div>Typhus</div> <div>Enteric</div> <div>Of other, or doubtful</div> </div> sorts	..	1	..	..	..	..	..	..	..
"Continued" Fevers .. .. .	..	1	..	..	..	..	..	..	..
Diarrhoea and Dysentery ..	2	1	7	2	1	..	..	..	1
Cholera .. .. .	..	..	..	3	..	..	..	..	..
Rheumatic Fever .. .. .	..	1	..	..	..	..	..	..	..
Erysipelas .. .. .	..	..	..	..	..	..	..	..	..
Pyæmia .. .. .	..	..	..	..	..	..	..	..	..
Puerperal Fever .. .. .	..	..	..	..	..	..	..	..	..
AGUE .. .. .	..	11	4	7	..	..	..	..	3
PHTHISIS	10	42	30	60	4	..	..	16	..
BRONCHITIS, PNEUMONIA, AND PLEURISY	1	17	..	6	..	..	..	2	..
HEART-DISEASE	2	1	4	2	..	..	..	1	..
INJURIES	23	73	70	180	4	..	..	10	..
DISEASES NOT NAMED ABOVE	..	..	..	..	..	..	..	..	..
Total	40	147	138	269	10	..	..	33	..

TABLE of DEATHS during the year 1879 in the three Divisions of the Rural Sanitary District of the Leominster Union, classified according to Diseases, Ages, and Localities, and showing also the Population of such Localities, and the Births therein during the year.

[illegible]

THE LEOMINSTER RURAL SANITARY AUTHORITY.

December 31st, 1879.

Gentlemen,—In presenting you with my Sixth Annual Report, I regret to state therein that your rate of Mortality has increased this year 5 per 1000 compared with the one for 1878; such increase corresponding with the same rate throughout the County in other rural districts for the last twelve months. It however affords me gratification to state that, with the exception of one case of Enteric Fever, such death-rate has not originated from a single case attributable to or caused by preventable disease—this fact convincing your Board that it is not for want of Sanitary legislation that the rate is so high; your district in every quarter participating in the ill-effects of a severe spring and winter, added to a sunless summer. I would further mention that, with the exception of Whooping Cough, there have been no symptoms of anything like an Epidemic in your Union district. And further, although this increased rate of mortality is large, it however has only increased the number of deaths of infants and those under five years of age by 5 for the whole year, such increase being and originating from those over 60 years of age, and principally from Lung Affections, owing to cold, &c.

The case of Enteric Fever alluded to emanated from a Sanitary defect in the construction of a cesspool being too near the rear of the cottage, allowing the gases therefrom to be driven into the living room when the wind set in that direction. Steps are being adopted to remedy this evil. Of general subjects to mention, I would again suggest that some scheme of Drainage should be carried out for the large parish of Kingsland within your Union District. As I have reported to your Board before, matters are far from Sanitary in many parts of the parish, more particularly near the Public Schools, where over 100 children congregate every day.

Your particular attention is now solicited upon the question of Water Supply to houses and tenements within your Union District, under the Public Health (Water) Act, 1879; and in order to assist you, a house-to-house survey of the water supply

to each, is being made ; eight of your Parishes having been gone through, and waiting your Board's orders thereon.

The third bi-annual Sanitary Survey is being carried out, and nuisances existing have been removed, as specified in Table hereto attached.

I am, Gentlemen,

Your obedient Servant,

VAVASOUR SANDFORD, M D., &c , &c.

Bridge House, Hereford, Dec. 31, 1879.

THE WEOBLEY RURAL SANITARY AUTHORITY,
DIVIDED INTO TWO DISTRICTS WITH TWO INSPECTORS OF NUISANCES.

Area: 49,959 Acres, consisting of 28 Parishes.

Population, about 9,131.

Houses, about 1,149.

Aggregate number of people to each house, 4 and a half.

The Third House-to-house Survey is nearly complete.

Number of Nuisances found to exist in the Weobley

District	76
Consisting of removal of Privies, altering Drains,	
removing Dangerous Pigstyes	7
Privies and Cottages (common nuisances)	61
Overcrowding	4
Cottages Cleansed, Whitewashed, and Disinfected	3
Houses condemned	1
	<hr/>
	76

In the Diliwyn District	65
Consisting of generat Repairs to Cottages	} 49
Removal of Offensive Privies, Cesspools, &c., &c...	
Whitewashing and Disinfecting	
Cleaning Drains, &c.	
In hand	16
	<hr/>
	65

Births for the whole District	166
Deaths ditto ditto	170
Rate of Mortality ditto, ditto...	18.6 per 1,000

Table of Mortality and Sickness in the two Divisions of the Rural Sanitary District of the Weobley Union, for the twelve calendar months ending December 31st, 1879.

NAME OF DISEASE.	Deaths (among all classes) registered as having occurred in the District or Division.		Sickness and Deaths among Paupers.			
	Total Deaths registered as above.		Sickness and Deaths among out-door paupers; and among any paupers who belong to the District or Division, and have been removed into the Workhouse on account of illness; whether the Workhouse be within or without the District or Division.			
	Aged under 5.	Aged 5 and upwards.	NEW CASES. Aged under 5.	Aged 5 and upwards.	DEATHS. Aged under 5.	Aged 5 and upwards.
I.	II.	III.	IV.	V.	VI.	VII.
Small Pox .. .. .	..	..	4	7	..	..
Measles .. .. .	..	..	4	6	1	..
Scarlatina	1	2	4	8	3	1
Diphtheria	3	2	7	..	..	..
Croup (not "spasmodic") .. .. .	..	..	..	..	..	..
Whooping-Cough	5	..	16	8	2	..
"Continued" Fevers { Typhus Enteric Of other, or doubtful sorts	..	..	..	..	..	..

Diarrhoea and Dysentery .. .. .	..	1	3	4	..	..
Cholera .. .. .	..	..	..	..	..	..
Rheumatic Fever .. .. .	..	..	..	5	..	..
Erysipelas .. .. .	..	..	..	..	..	..
Pyæmia .. .. .	..	..	..	..	..	..
Puerperal Fever .. .. .	..	..	..	..	..	..
AGUE .. .. .	..	..	..	..	..	..
PTITISIS .. .. .	..	7	..	3	..	..
BRONCHITIS, PNEUMONIA, AND PLEURISY	16	23	21	30	..	2
HEART-DISEASE .. .. .	..	23	..	10	4	6
INJURIES .. .. .	..	7	1	8	..	7
DISEASES NOT NAMED ABOVE	17	63	33	189	6	4
Total	42	128	94	278	15	27

THE WEOBLEY RURAL SANITARY AUTHORITY.

December 31st, 1879.

Gentlemen,—My Annual Report for the year ending to-day will cause a certain amount of regret on reading it, inasmuch as the rate of Mortality has been considerably on the increase in both your districts, not only from causes attributable to the increase in other Union districts within the combination; but although your Union is the smallest in such combination, still nearly as many deaths are registered this year in your Union district as emanating from infectious and preventable disease as any other or larger district in such combination, having no less than five deaths recorded as from Diphtheria, three from Scarlet Fever, and five from Whooping Cough. Four out of the five cases of Diphtheria existed in the Dilwyn district, as also the same number from Whooping Cough. There can be no doubt whatever that nearly all the cases of Diphtheria are traceable to the unsanitary state of premises where the cases occurred; as the following copy of my Official Report to the Local Government Board, Whitehall, London, will testify, and which Report I read to your Sanitary Authority before forwarding copy of same to London:—

“The Vinery, Hereford, September 29th, 1879.

“Gentlemen,—My report to you to-day is satisfactory as regards the amount of deaths within your Union district, being only 40 from all causes this quarter, against 48 for the quarter ending June 30th last, thus showing a decrease of eight, notwithstanding four deaths are recorded from Diphtheria, two from Whooping Cough, and two from Hemorrhage during labour, all in the Dilwyn district of your Union. Of these 40 deaths, 13 only are below five years of age. Your Weobley district has considerably lessened its number of deaths, being only 18 this quarter against 33 for the June quarter. It only remains for me to report to your Board and the Local Government Board that the increased rate of mortality emanates from your Dilwyn district, being 22 this quarter against 15 for last June quarter, such increase being assigned and registered as four from Diphtheria, two from Whooping Cough, two from Hemorrhage during labour, two from Accident, the balance from old age, natural causes, &c., &c.

"Of prevailing illness, Diphtheria and Whooping Cough have shown severely in the Dilwyn district, about 14 cases of Diphtheria having occurred, resulting in four deaths of children : such cases showing in cottages isolated and on a high level, the first in a place called the 'Spout House,' five cases out of a family of seven. On visiting this place to ascertain the cause, I found fearful over-crowding in the sleeping-room, and in front of the door, three feet only therefrom, I found a foul and stinking untrapped drain, added to this a lot of horrib'e pigs' wash in a state of fermentation, and what was worse still wilful over-crowding, the whole family of seven sleeping in one room 12ft. square, the mother and one child dangerously ill amongst the lot. There was another bed-room, but the man filled it with potatoes spread on the floor to enable him to pick out and sort the rotten ones from the good. I cannot describe the dreadfully impure air generated therefrom, more than enough to account for Diphtheria being there.

"The second house was in a place called Maggott's Green. In this cottage three cases occurred, resulting in one death to a child. On investigation, to ascertain the cause, it was soon made manifest ; the water supplied out of the well was bad to begin with. Added to this, the people preferred to drink some obtained from a surface spring in a field near the house. Close to such spring ran a ditch or brook, into which the liquid filth from a pig's-stye and a hole receiving the filth from the house, which, during rain, filled and flowed into such brook, rendering such water in the before-mentioned spring poisonous and unfit to drink. So here was more than enough to account for Diphtheria showing t

"The third case took place in a hut or house called 'The Haven.' This place was simply horrible and totally unfit for human occupation, and three feet from the door was a drain which received the overflow of a cesspool situate some fifteen yards from the hut. During the late rains this place burst its bounds and gave off gases most deadly and too horrible to bear—this boy died of Diphtheria here—he or his family had no communication with either of the before-mentioned cases ; the hut is situated in an isolated field.

"The fourth house attacked was a place called the 'Stocking-field.' Here were four cases, resulting in two deaths of children—one dying without any medical advice being obtained. On these premises I found more than enough to account for Diphtheria showing. Near, and at the rear of the house, a pig is kept, and from it ran a foul and stinking drain, also receiving the liquid filth from a heap of decomposing animal and vegetable

matter. This drain ran within three feet from the back door, and only one measured foot from the top of the well ; added to this, and worst of all, I found a hogshead full of pig's wash, consisting of animal and vegetable matter, close to the back door. This stuff was then working or fermenting, throwing off fearfully septic gases, fatal to i hale—indeed you could not possibly go within twenty yards of the stuff without danger : so here was more than enough to account for Diphtheria making its appearance.

“The fifth house was situated at a place called Bearton. No sanitary defects are visible to account for its making its appearance here, but, from minute inquiry, I am informed, upon good authority, this child was seen playing with one of the family residing at Stockingfield, and so this would at once account for its making its appearance at this cottage.

“The sixth occurred in a house in a row situated in the town of Dilwyn, to a lad about 14—a very mild case. The water to these houses is impregnated with surface refuse during rain and unfit to drink.

“These are all the cases as yet reported to me, and on looking carefully at the matter it will be at once made apparent that all the cases emanate from existing defects and want of Sanitary precautions but one, that of the child living at Bearton, where direct impregnation was undoubtedly the cause.

“On visiting the village of Dilwyn several times I found many nuisances about, which never ought to have been allowed to have accumulated. The well that supplies water to the public school I also found was open to the children attending, then drinking it, after my orders some three years ago to close this well in consequence of its great impurity.

“I must now ask for an order to close this well permanently. This will, of course, necessitate your Board providing water from another source for the children attending these schools. Up to now they have obtained it from where they could. I have had some of the water from the wells analysed near these schools, one of which is pronounced very good ; it is on the Vicar's property. Two or three gallons per day from this well placed under the master's distribution to the children would be sufficient to meet the demands during winter, and I feel assured, from what I have seen of the worthy Vicar, that he would be only too glad to allow this quantity of water to be drawn from his pump every day during winter. This temporary supply will enable your authority to obtain water from another source for the schools before summer arrives, when the demand will be much more.”

As regards the Scarlet Fever cases, they occurred in the Weobley District, and were confined to two houses—one a post-office—which, to prevent propagation of the disease, I was compelled to have closed for two months, until proper precautions and disinfection had been adopted.

The Whooping Cough epidemic caused five deaths, and was most fatal in the Dilwyn district, causing four out of the five deaths.

These are the principal subjects to lay before you ; and I have only to add that the third bi-annual House-to-house Sanitary Survey is being completed by your Inspectors, as also a house-to-house Water Supply investigation is being made throughout your Union district.

I am, Gentlemen,

Your obedient Servant,

VAVASOUR SANDFORD, M.D., &c., &c.

Bridge House, Hereford, Dec. 31st, 1879.

SANITARY HINTS.

PURE DRINKING WATER.—Avoid, as far as you can, every water which can even be *suspected* of contamination with the filth from sewers, house drains, privies, cesspools, and the like. See that cisterns and water butts are clean, and especially that the overflow pipes do not open direct into any drain. Water should be clear, colourless, and without smell. Water can only be really tested by a difficult and careful chemical analysis. Drinking-water is the better for being filtered. A costless filter may be thus made:—Take a flower-pot and plug the hole, not too tightly, with a piece of sponge; add a layer of powdered animal charcoal about one inch thick, then the same quantity of clean sand, and on that some coarse gravel. The charcoal should be occasionally re-baked or washed with Condyl's Fluid; in epidemics of typhoid fever or cholera, the water should be boiled before filtration.

DRAINS, CLOSETS, &c.—Flush and, if possible, scrub and cleanse once daily with plenty of water, containing some disinfectant, as crude sulphate of iron, chloride of zinc, carbolic acid, or Cooper's Patent Salts. See that the traps are well charged with water, that they do not allow bad smells to escape in the house, and that the main house drain is ventilated by the rain water pipe, by charcoal air filters, or otherwise. The pan of every W.C. ought to have a tube or shaft attached to the soil pipe just below the trap of the pan; this tube ought to be carried rather above the roof or outside the house, not near any window or water cistern. A two-inch zinc pipe will answer every requirement to allow the gases to pass up such tube that may generate or be driven in the soil pipe from a main sewer or cesspool that the soil empties into; thus preventing any party using such W.C. from inhaling and being poisoned by such gas when the pan has been used and the handle is being pulled up for flushing, cleansing, and emptying.

ASH AND PRIVY PITS.—Cover, so as to keep them dry, well drained, thoroughly spread over with ashes or dry earth, frequently emptied, sprinkle with a disinfecting powder—(McDougall's or Cooper's)—and be careful that no slops are thrown in. Decaying animal and vegetable refuse are sources of danger, and should be buried or dug into the earth away from houses. Remove all pigs, poultry, and rabbits, to some distance from living rooms.

VENTILATION.—Keep rooms and passages sweet by opening doors and windows for admission of air. Fires greatly promote ventilation. Over-crowding is exceedingly dangerous. Whenever

possible, 500 cubic feet of air breathing space should be allowed to each individual in any sitting-room, bedroom, or work-room. Gas lights contaminate the air very rapidly. Pure air is less dependent on cubic space than on efficient ventilation, which may be secured by the following simple and economical method:—Raise the lower sash of the window two or three inches, and fill in the opening underneath the bottom rail with a piece of wood; this leaves a corresponding space between the meeting rails in the middle of the window, through which a current of air enters and is directed towards the ceiling, whence it should escape by a valvular opening. The fewer persons and things in a sick-room the better. Beds should be freely exposed to the air during the day, and soiled linen should not be kept waiting for washing in unventilated closets.

CLOTHING, Food, &c.—While warmth is kept up, transpiration should be free; in summer and autumn a broad flannel bandage should be worn round the abdomen, and the linen should be constantly changed. The food should be plain, fresh, wholesome, and sufficient; avoiding intemperance in both eating and drinking. Bodily weakness favours cholera, typhus, typhoid, and other fever,—therefore, avoid exhaustion, over-fatigue, and fear as much as possible. Milk, rice, meat, soups, potatoes, beans, pea-meal, bacon, entire wheaten bread and cheese are the cheapest nourishing articles of food. One of the most frequent causes of the early death of young children is improper feeding. The proper food of children is breast milk. When the mother and child are both healthy no other food is required for the first six months. When the child is first born no other food is required, and the practice of giving gruel, butter, honey, and castor oil to new-born babes is prejudicial to their health. When the mother has a deficiency of milk, cow's milk or Swiss milk is the best substitute. It should be given with a third of warm water and a little sugar. For the first six weeks the child should be suckled every two hours in the day and every three or four hours at night. Gradually as it gets older the intervals of feeding may be prolonged. Children should not be fed to keep them quiet but at regular intervals. Mothers should never fall asleep when suckling their babes, as this is one of the most frequent causes of suffocation in bed. A child should not be weaned suddenly, but by degrees, and ought not to have the breast after the ninth month. When the child has cut its front teeth it may have some light food, such as bread, baked finely ground entire wheaten flour, or milk biscuits added to its milk, or "Liebig's Food;" and once a day, meat broth or beef tea, with bread or biscuits soaked in it; or the yolk of an egg lightly boiled; when it is a year and a half old, some fine chopped meat—but milk should form the principal part of its food. Solid meat and potatoes, fat pork and fish, which form the food of grown-up people, should on no account be given to children.

THE SICK ROOM.—Keep sweet by a small fire and plentiful supply of fresh air, as above described. Remove bed-curtains, window-hangings, and carpets. Sweep rooms daily, and let the floor be frequently rubbed with a damp cloth or dry rubbed, and when necessary chloride of lime or acetic acid sprinkled from time to time on the floor. Keep within reach of the patient a basin charged with disinfectant for him to spit into; and have close at hand a tub or pail of diluted disinfecting fluid, into which should be immediately thrown any article of clothing removed from the patient. Instead of a pocket handkerchief use small pieces of rag, to be immediately burnt after use. A piece of mackintosh sheeting placed beneath the sheet or blanket of a bed prevents discharge soaking through. A tea-cup full of green copperas solution, 2lbs. to a gallon, put into the night pan before it is used by the patient renders the discharge harmless. Matters discharged from the body should be received in a vessel containing active disinfectants, as about half a pint of either of the following solutions, namely:—Of 2'bs. of sulphate of iron in a gallon of water; one quart of chloride of zinc to three quarts of water; four fluid ounces of carbolic acid (Calvert's No. 5) to a gallon of water. Glasses, cups, and other utensils of the sick room should be cleansed before they are used by other persons. Hang, outside door of room, a sheet or old counterpane, and keep it moistened with some disinfecting solution.

INFECTED CLOTHING AND BEDDING.—Soiled linen, bedding, and such woollen articles as admit of washing, on being removed from the patient should be plunged into boiling water before they are taken from the room, and, in addition, for an hour or two, into a tub of solution of four fluid ounces of carbolic acid (Calvert's No. 5) to a gallon of water; after this they can be boiled and washed. Cloth clothes, mattresses, beds, pillows, &c. (in the absence of a proper public disinfecting establishment, which should be so constructed that its temperature can be well regulated and maintained at from 240 dg. to 250 dg. Fahr. for four or five hours), should be disinfected by smoking with brimstone, exposure in the open air, to the sun, if possible, or if raining in front of a large fire. Washing and lime-whiting of premises should be attended to periodically.

THE PATIENT.—Separate the sick person from the healthy as soon as possible. In cases of scarlet fever, on the seventh and eight day, anoint the surface of the body twice a day with camphorated lard or palm oil, or wash with diluted Condy's Liquid. When the patient is sufficiently strong let him take a warm bath, and afterwards be well washed with carbolic acid-soap and water. During a week or ten days from this time he may be kept apart, repeating every two or three days the disinfecting ablutions; after which time he can, with safety, mix again with his family. Scarlet Fever and Small Pox seldom spread beyond the sick-room when

separation and disinfection have been properly used. Whenever children have sore throats or an eruption on the skin, they should be separated from the rest of the family until they have had medical advice or those symptoms have disappeared. Measles and Whooping-cough are contagious, and cases should be more carefully isolated and nursed than is usually done. In the event of death early burial is very desirable. Powdered charcoal, 2 lbs., Cooper's Patent Salts, or good Carbolate Powder, or sawdust nearly saturated with a solution of chloride or sulphate of zinc, placed in the coffin, retards decomposition and putrefaction, or takes away offensive smells by absorbing noxious gases.

NURSES AND ATTENDANTS.—Woollen dresses are to be avoided, and preference given to washing materials. Prevent contact, as much as possible, between attendants and inmates of the house. After handling the sick or things connected with them, let the nurse be careful immediately to wash her hands in diluted Condy's liquid, or with carbolic acid-soap.

DISINFECTANTS.—For *Nuisance Prevention*, as detected by the nose test, those most generally used are Chloride of Lime, Cooper's Salts, Condy's Fluid, Burnett's Liquid, Chloralum, Carbolic Acid, and its compounds. Chloride of Lime and Chlorine require care and experience in management; when used too freely in inhabited rooms, they give rise to irritation of the lungs and air passages. Burnett's Fluid and Carbolic Acid are most efficacious but are poisonous, and the latter possesses a very strong smell, which to many persons is extremely offensive. Ten pounds of sulphate of iron, five gallons of water, and half a pint of common carbolic acid form a good and cheap disinfectant for drain. Iodine, volatilized on a heated surface, is an excellent disinfectant, but is expensive. Carbolic Acid, Chlorozone, or Condy's Liquid improve the air when diffused by means of a large brush, a scent spray, or the hydronette syringe with rose. For *Infection Prevention*,—should be thorough—not diluted, applied in considerable strength,—while the room is occupied by the living it is impossible to use volatile or aerial disinfectants in such quantity as to be of real service. When the room is vacated, to disinfect thoroughly, close the windows, stop up the chimney and every aperture and outlet from the room, and use sulphur in the proportion of $1\frac{1}{2}$ oz. for every 100 cubic feet of space. The sulphur may be safely burnt in a shallow pipkin or coarse earthenware saucer containing some live coals or coke; the saucer should be supported on a pair of tongs laid across a pail of water, so that in case of accident the burning sulphur may fall into the water and do no injury. The room should be closed for twelve hours—then the wall papers should be removed, stripped off, and burnt; the walls, ceiling, floor, painted parts of the room and articles of furniture washed with solution of carbolic acid, and the ceilings and walls lime-washed; the room

should be unoccupied and freely open to the external air for a fortnight, if possible, for plenty of fresh air is the truest, best, and cheapest disinfectant.

VACCINATION.—Every child should be vaccinated before the third month; if delayed beyond that period, it may increase the irritation of teething. Skin rashes are often erroneously said to be caused by vaccination. All persons should be re-vaccinated after eight years of age,—and when Small Pox prevails in a family or neighbourhood.

Clergymen, medical practitioners, Scripture readers, and other persons interested in sanitary reform living in the district, are invited to inform the Medical Officer of Health, and the Sanitary Inspectors, of any nuisances which they discover in their neighbourhood—such communications to be considered strictly confidential. Every ratepayer has a right of complaint, and it is only by such co-operation that Sanitary Officers have a power of remedying nuisances and of checking the ravages of epidemic disease.

